



483787



September 15, 2014

Sent via Electronic Mail

Ms. Charlene Falco
Illinois Environmental Protection Agency
Bureau of Land, #24
Federal Site Remediation Section
Federal Facilities Unit
1021 North Grand Avenue East
Springfield, IL 62702

Re: MONTHLY PROGRESS REPORT AUGUST 2014
INTERIM CONSENT ORDER ACTIVITIES
DEPUE SITE, DEPUE, ILLINOIS

PEOPLE OF THE STATE OF ILLINOIS VS. HORSEHEAD IND., INC., ET AL.
CASE NUMBER 95 CH 18
SITE ID 0110300003 - BUREAU

Dear Ms. Falco:

This progress report is being submitted by ENVIRON International Corporation (ENVIRON), on behalf of the DePue Group. The attached revised report addresses the Interim Consent Order (ICO) activities conducted from August 1 through August 31, 2014 at the DePue Site. The report also indicates planned activities for the next reporting period.

This report complies with the requirements of the ICO, Section XVI, paragraph C, and Attachment 1, paragraph 12.

If you have any questions, please call.

Sincerely,

ENVIRON International Corporation

Scott Hayter
Principal Consultant

Attachment

**MONTHLY PROGRESS REPORT
FOR
AUGUST 2014**

**INTERIM CONSENT ORDER ACTIVITIES
DEPUE SITE
DEPUE, ILLINOIS**

Prepared For:

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- 1 copy – Eric Bryant, Village of DePue (electronic copy only)
- 1 copy – Tony Wlodarski, AMEC (electronic copy only)

I. OPERABLE UNIT 1: SOUTH DITCH SEDIMENT

- Completed
- The DePue Group has started coordinating with the Illinois Environmental Protection Agency (IEPA) on issues regarding the five-year review.

II. OPERABLE UNIT 2: PHOSPHOGYPSUM STACK

Summary of Work Performed during the Reporting Period:

- Routine maintenance and monitoring activities continued at the phosphogypsum stack. These activities included pumping, observing, and recording flow and water levels, maintaining storm water diversion systems (catch basins, dams, and discharge piping), measuring flow and collecting samples at the Outfall 002 when applicable, inspecting, monitoring and maintaining groundwater collection and pumping systems, inspecting and maintaining cover integrity and supporting and maintaining the Health and Safety program.
- The center pivot irrigation system discharged 8.5-million gallons during the month of August.
- As of September 2, 2014, 145.3-million gallons of water had been discharged through the treatment wetland. Flow rates and discharge are logged daily, Monday through Friday and reported monthly to the IEPA.
- No samples were collected from Outfall 002 during August 2014.
- Quarterly sampling of Duck pond, Clear water pond, upper and lower swales were collected on August 4, 2014
- Preparation of a Phase I/II/III Investigation Report Addendum for the Intermediate Sand has been delayed due to a discrepancy in final survey elevations of two intermediate Sand wells northwest of the gypstack. Verification and re-survey is underway.

Summary of Work Planned for the Next Reporting Period:

- Continue routine maintenance and monitoring activities within the Phosphogypsum Stack system.
- Complete the re-survey of select intermediate sand wells and finalize preparation of the Phase I/II/III Investigation Report Addendum for the Intermediate Sand.

Problems Encountered/Resolved:

- None

Revisions to Scopes of Work and Schedules:

- None

Changes to Key Personnel, Consultants, Contractors, or Subcontractors:

- None

III. OPERABLE UNIT 3: PLANT SITE

Summary of Work Performed during the Reporting Period:

- Risk Assessment
 - The DePue Group conducted the Bluff Area Sampling and Vegetation Survey the week of August 25, 2014.

- Interim Water Treatment Plant (IWTP) Operations
 - The IWTP treated 707,257 gallons of water during July 2014. The influent and effluent data are included in Attachment 2:
 - Approximately 5,600 pounds of zinc were removed.
 - Approximately 280 pounds of manganese were removed.
 - Approximately 260 pounds of copper were removed.
 - The following activities were completed at the IWTP:
 - Routine operation and maintenance.
- Site Operations
 - The most recent operable unit (OU) 3 site fence inspections were completed on August 29, 2014. There were no issues noted; all fencing was found secure and “No Trespassing” signs were intact. No repairs were necessary.

Summary of Work Planned for the Next Reporting Period:

- Risk Assessment
 - The DePue Group will begin evaluating the data from the Bluff Area Sampling Event.
- Interim Water Treatment Plant
 - The DePue Group will continue routine operation and maintenance at the IWTP.

Problems Encountered/Resolved:

- None

Revisions to Scopes of Work and Schedules:

- None

Changes to Key Personnel, Consultants, Contractors, or Subcontractors:

- The DePue Group notified IEPA of the addition of Terra Technologies Inc. as a subcontractor to Environ for the vegetation assessment of the Bluff Area.

IV. OPERABLE UNIT 4: OFF-SITE SOIL

Summary of Work Performed during the Reporting Period:

- Off-Site Soil Design Study
 - The DePue Group continued preparation of responses to IEPA comments on the Pilot Study report.

Summary of Work Planned for the Next Reporting Period:

- Off-Site Soil Design/Pilot Study
 - The DePue Group will submit responses to IEPA comments on the Pilot Study.

Problems Encountered/Resolved:

- None

Revisions to Scopes of Work and Schedules:

- None

Changes to Key Personnel, Consultants, Contractors, or Subcontractors:

- None

V. OPERABLE UNIT 5: DEPUE LAKE AND FLOODPLAIN

Summary of Work Performed during the Reporting Period:

- DePue Lake Risk Assessments
 - The DePue Group started to make revisions on the OU5 Baseline Human Health Risk Assessment based on recent coordination and guidance from IEPA.
 - The DePue Group started the Surface Water Quality Monitoring Work the week of August 11, 2014. The monitoring along with other supplemental studies are to address IEPA's comments on the Sediment Preliminary Remediation Goal (PRG) Technical Memorandum and to support completion of the OU5 Baseline Ecological Risk Assessment (BERA).

Summary of Work Planned for the Next Reporting Period:

- DePue Lake Risk Assessments
 - A revised final draft of the OU5 Baseline Human Health Risk Assessment will be submitted to IEPA for approval.
 - The DePue Group will continue to work with IEPA toward finalizing the scope for additional investigations to support completion of the OU5 BERA.

Problems Encountered/Resolved:

- None

Revisions to Scopes of Work and Schedules:

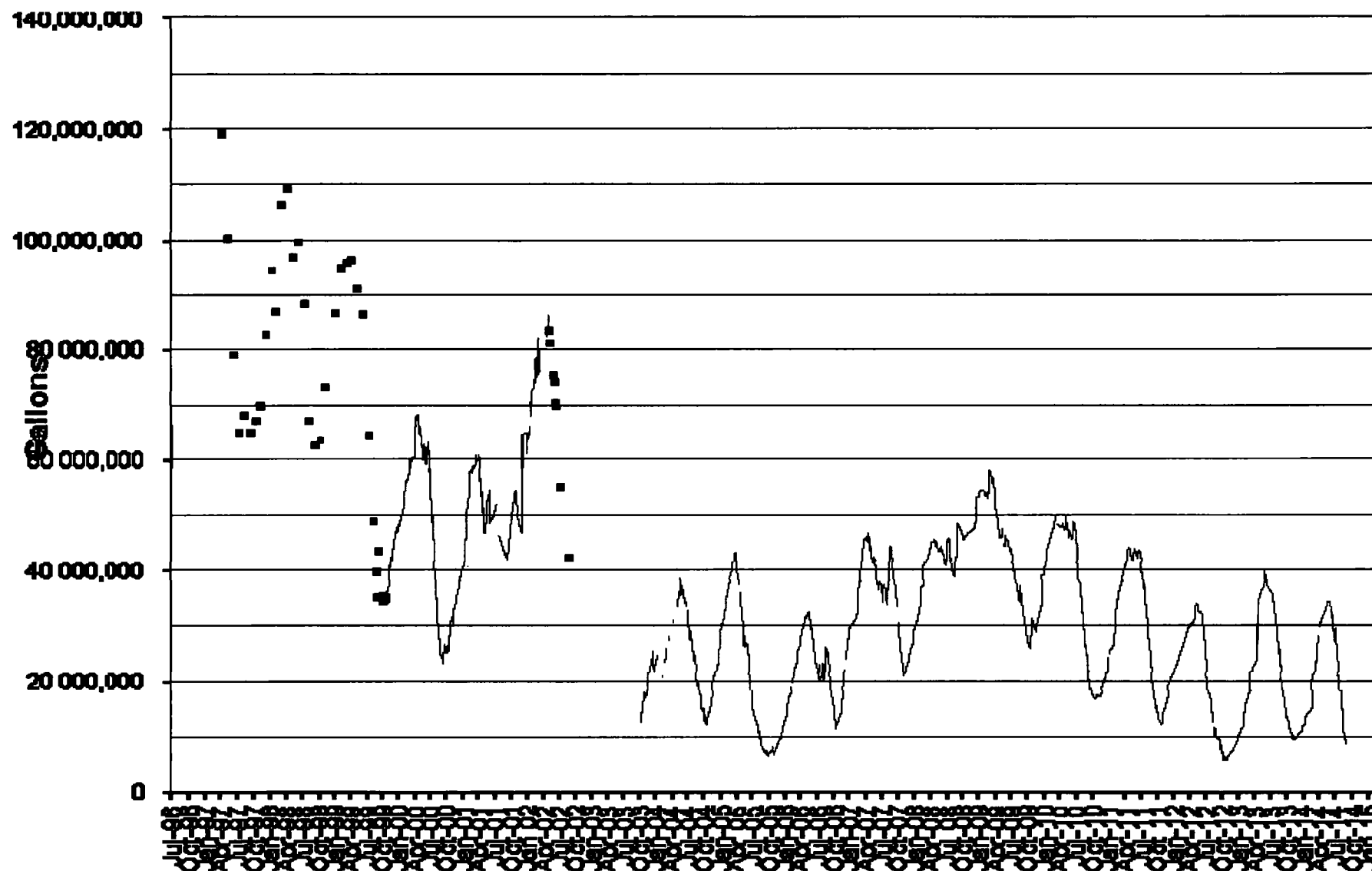
- Additional requirements necessary to address OU1 (South Ditch Sediments), if any, will be completed as part of the scope of work for OU5 (DePue Lake and Floodplain).

Changes to Key Personnel, Consultants, Contractors, or Subcontractors:

- None

Attachment 1
Gypstack

Surface-Water Volumes within the Phosphogypsum Stack System

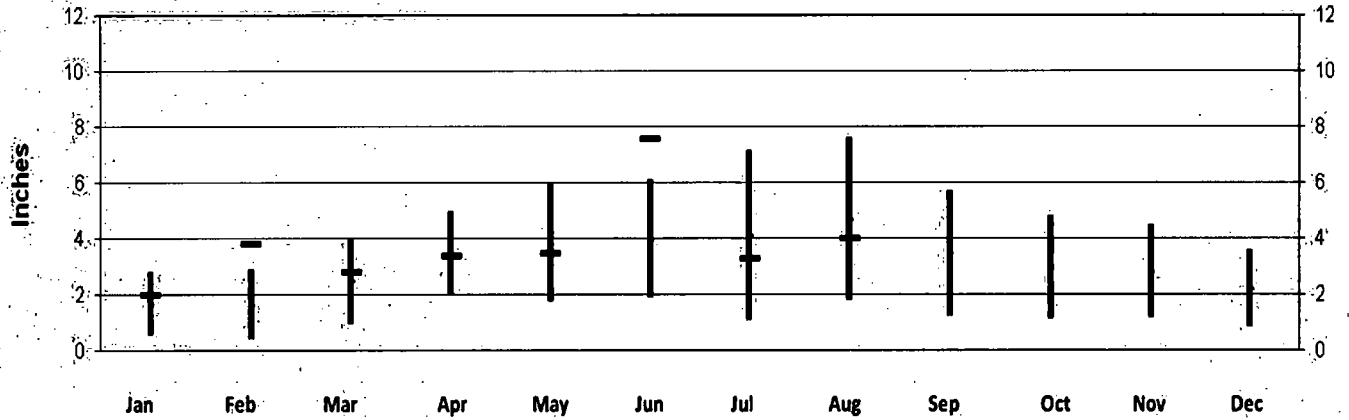


1978 Through 2014 DePue Site Precipitation

2014 Monthly Averages
(± 1 Standard Deviation)

Monthly Average (1978 - 2014)

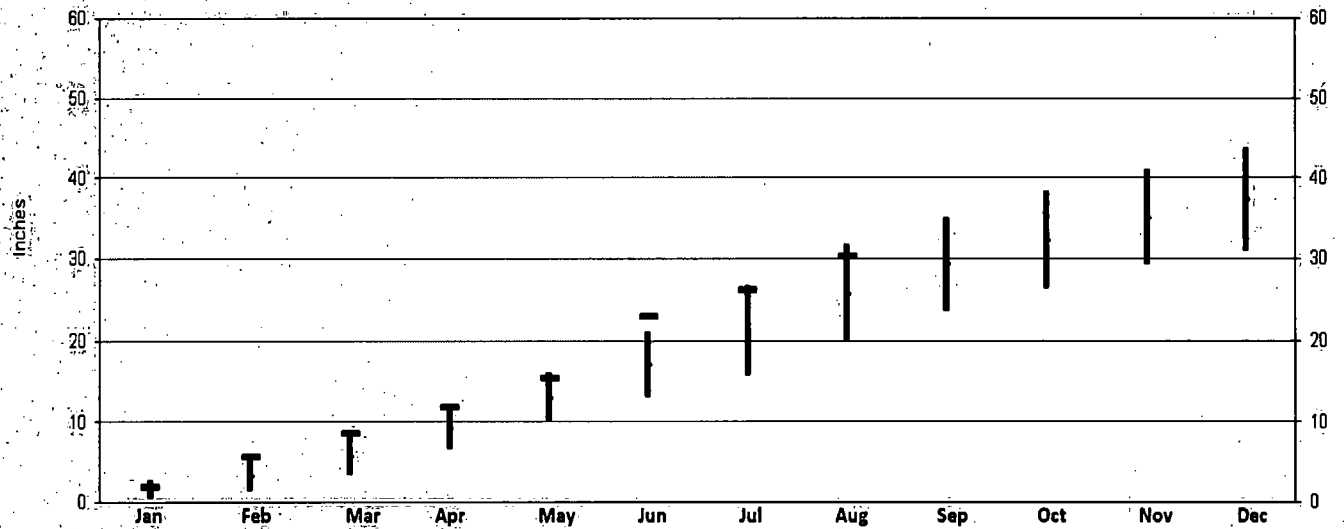
- 2014 Monthly total



2014 Average Monthly Cumulative Totals
(± 1 Standard Deviation)

Average Monthly Cumulative Total (1978-2014)

- 2014 Monthly Cumulative Total



Analytical Results for Samples Collected at the 002 Outfall (mg/L)

Sample Collection Date	pH (S.U.)	Total Dissolved Solids (mg/L)	Total Phosphorus (mg/L)	Fluoride (mg/L)	Sulfate (mg/L)	Ammonia-Nitrogen (mg/L)	Unionized Ammonia (mg/L)
1/13/14	6.18	295	0.683	0.430	94.2	<0.0600	<0.00100
3/12/14	7.65	226	0.154	0.365	54.8	0.708	0.00319
3/24/14	7.62	346	1.03	0.431	102	0.243	0.00158
4/03/14	7.73	332	0.770	0.444	76.2	0.220	0.00199
4/10/14	8.26	461	0.567	0.614	128	0.142	0.00574
4/17/14	8.74	478	0.631	0.589	173	0.120	0.0168
5/05/14	8.86	493	1.01	0.444	159	0.186	0.0477
5/12/14	8.61	513	0.596	0.626	139	0.130	0.0285
5/19/14	8.72	474	0.341	0.556	143	0.0760	0.0124
6/2/14	7.80	1000	1.25	0.802	134	0.140	0.00614
6/11/14	8.39	505	0.409	0.448	122	0.197	0.0178
6/16/14	7.78	549	1.85	0.681	163	0.109	0.00274
6/20/14	8.43	413	<0.100	0.412	87.3	0.135	0.0164
6/30/14	8.63	291	0.834	0.408	38.0	0.171	0.0365
7/01/14	8.43	338	0.335	0.325	42.6	0.151	0.0162
7/02/14	8.45	400	0.287	0.366	51.2	0.217	0.0260
7/14/14	8.12	466	0.558	0.632	98.3	0.130	0.00920
Former Permit IL 0032182 Limits	6.5 – 9	1,000	Report	1.4	500	15	0.04

Analytical Results for Samples Collected Quarterly at the Duck Pond, Lower Swale, Upper Swale, Clear Water Pond (mg/L)

Sample Collection Date	pH (S.U.)	Total Dissolved Solids (mg/L)	Total Phosphorus (mg/L)	Fluoride (mg/L)	Sulfate (mg/L)	Ammonia-Nitrogen (mg/L)
Duck Pond						
2/27/14	No sample collected, pond frozen					
5/19/14	7.80	498	0.170	0.651	98.4	0.142
8/04/14	8.54	328	<0.0500	0.517	26.5	0.184
Lower Swale						
2/27/14	7.28	3100	63.4	3.51	1960	40.8
5/19/14	7.30	2420	63.7	3.60	1260	38.5
8/04/14	7.45	2750	202	4.17	1280	15.7
Upper Swale						
2/27/14	7.30	3730	64.3	4.14	2350	72.0
5/19/14	7.35	3350	61.2	3.89	2050	49.4
8/04/14	7.44	4320	95.2	3.42	2570	31.5
Clear Water Pond						
2/27/14	No sample collected, pond frozen					
5/19/14	7.33	1830	40.1	3.89	1070	20.8
8/04/14	7.25	2740	64.8	4.17	1500	12.2

Attachment 2

Summary of Sampling Results DePue Interim Water Treatment Plant

Interim Consent Order Report
August, 2014
Summary Of Analytical Results
DePue Interim Water Treatment Plant

Influent Data (mg/L)

Date	TSS	Cadmium	Copper	Iron	Manganese	Nickel	Lead	Zinc	pH- std units	Lift Station Flow (gpm)
01/07/14	50	1.8	50	2.0	53	1.1	<1.0	1,000	5.88	10
02/04/14	31	1.4	51	4.1	46	<1.0	<1.0	930	5.98	10
03/04/14	140	1.2	47	1.6	45	1.0	<1.0	870	6.01	54
04/01/14	33	1.6	43	9.5	39	1.0	<1.0	870	5.86	36
05/06/14	160	1.6	49	4.1	40	1.5	1.1	820	6.01	32
06/03/14	110	1.4	46	2.6	40	<1.0	<1.0	780	5.88	22
07/01/14	190	0.6	18	4.3	15	<1.0	<1.0	800	5.80	25
08/05/14	22	1.6	45	1.5	48	<1.0	<1.0	950	5.96	20
YTD Average	92	1.4	44	3.7	41	1.1	1.0	878	5.92	26

Notes:

1. Values preceded by "<" were not detected greater than the laboratory method detection limit shown.

Interim Consent Order Report
August, 2014
Summary Of Analytical Results
DePue Interim Water Treatment Plant

Effluent Data (mg/L)

Date	TSS	Cadmium	Copper	Iron	Manganese	Nickel	Lead	Zinc	pH - std units
01/07/14	<4.0	<0.02	<0.10	<0.10	<0.10	<0.10	<0.10	0.28	7.44
01/14/14	5.6	<0.02	<0.10	<0.10	<0.10	<0.10	<0.10	0.28	7.00
01/21/14	<4.0	<0.02	<0.10	<0.10	<0.10	<0.10	<0.10	0.18	7.04
01/28/14	<4.0	<0.02	<0.10	<0.10	<0.10	<0.10	<0.10	0.29	7.00
02/04/14	<4.0	<0.02	<0.10	<0.10	<0.10	<0.10	<0.10	0.39	7.20
02/11/14	<4.0	<0.02	<0.10	<0.10	<0.10	<0.10	<0.10	0.28	6.96
02/18/14	<4.0	<0.02	<0.10	<0.10	<0.10	<0.10	<0.10	0.17	7.00
02/25/14	<4.0	<0.02	<0.10	<0.10	0.12	<0.10	<0.10	0.23	7.04
03/04/14	<4.0	<0.02	<0.10	<0.10	<0.10	<0.10	<0.10	0.22	7.22
03/11/14	<4.0	<0.02	<0.10	<0.10	0.19	<0.10	<0.10	0.57	7.04
03/18/14	<4.0	<0.02	<0.10	<0.10	0.94	<0.10	<0.10	1.10	7.00
03/25/14	<4.0	<0.02	<0.10	<0.10	0.11	<0.10	<0.10	0.29	7.00
04/01/14	<4.0	<0.02	<0.10	<0.10	0.12	<0.10	<0.10	0.32	7.04
04/08/14	<4.0	<0.02	<0.10	<0.10	<0.10	<0.10	<0.10	0.20	6.98
04/15/14	<4.0	<0.02	<0.10	<0.10	0.10	<0.10	<0.10	0.32	7.14
04/22/14	<4.0	<0.02	<0.10	<0.10	<0.10	<0.10	<0.10	0.33	6.96
04/29/14	<4.0	<0.02	<0.10	<0.10	<0.10	<0.10	<0.10	0.26	7.00
05/06/14	10.0	<0.02	<0.10	<0.10	0.10	<0.10	<0.10	0.59	7.44
05/13/14	<4.0	<0.02	<0.10	<0.10	<0.10	<0.10	<0.10	0.29	6.88
05/21/14	<4.0	<0.02	<0.10	<0.10	<0.10	<0.10	<0.10	0.53	7.00
05/28/14	<4.0	<0.02	<0.10	<0.10	<0.10	<0.10	<0.10	0.22	7.42
06/03/14	4.9	<0.02	<0.10	<0.10	<0.10	<0.10	<0.10	0.49	7.00
06/10/14	5.6	<0.02	<0.10	<0.10	<0.10	<0.10	<0.10	0.39	7.00
06/17/14	<4.0	<0.02	<0.10	<0.10	<0.10	<0.10	<0.10	0.43	7.62
06/24/14	<4.0	<0.02	<0.10	<0.10	<0.10	<0.10	<0.10	0.45	7.66
07/01/14	<4.0	<0.02	<0.10	<0.10	<0.10	<0.10	<0.10	0.29	7.16
07/08/14	<4.0	<0.02	<0.10	<0.10	<0.10	<0.10	<0.10	0.26	7.64
07/15/14	11.0	<0.02	0.10	<0.10	0.12	<0.10	<0.10	0.76	7.00
07/23/14	<4.0	<0.02	<0.10	<0.10	<0.10	<0.10	<0.10	0.46	7.02
07/30/14	<4.0	<0.02	<0.10	<0.10	<0.10	<0.10	<0.10	0.46	7.06
08/05/14	7.2	<0.02	0.20	<0.10	0.29	<0.10	<0.10	1.40	7.00
08/12/14	<4.0	<0.02	<0.10	<0.10	<0.10	<0.10	<0.10	0.44	7.24
08/19/14	<4.0	<0.02	<0.10	<0.10	<0.10	<0.10	<0.10	1.10	7.06
08/26/14	<4.0	<0.02	<0.10	<0.10	<0.10	<0.10	<0.10	0.35	7.00

YTD Avg	4.6	0.02	0.10	0.10	0.14	0.10	0.10	0.43	7.13
Aug Avg	4.8	0.02	0.1	0.1	0.1	0.1	0.1	0.82	7.08
Aug Max	7.2	0.02	0.2	0.1	0.3	0.1	0.1	1.40	7.24

DISCHARGE LIMITS (mg/l)

	TSS	Cadmium	Copper	Iron	Maganese	Nickel	Lead	Zinc	pH-std units
Daily Max	30	0.3	1	4	2	2	0.4	2	6-9
Monthly Avg	15	0.15	0.5	2	1	1	0.2	1	6-9

Notes:

1. Values preceded by "<" were not detected greater than the laboratory method detection limit shown.